

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of claims:

1. (Currently amended) ~~Use of an article whose~~ A method for producing an article having a surface formed of a composite material, the method comprising:
microstructuring a surface of a non-metallic substrate; and
depositing a metallic layer onto the surface of the non-metallic substrate without applying an external current;
~~surface exhibits a composite material in full or in parts, wherein the non-metallic substrate contains at least one polymer and a composite material consisting of a non-metallic substrate containing at least one polymer, and a metallic layer present thereon and deposited without external current, having that includes a non-metallic substrate and a metal layer thereon and has an adhesive strength of at least 4 N/mm², as and moulding tool.~~
2. (Currently amended) ~~Use according to~~ The method of claim 1 characterised in that, wherein the standard deviation of the adhesive strength at six different measured value points distributed over the surface of the composite material is maximum 25 % of the arithmetic mean.
3. (Currently amended) ~~Use according to~~ The method of claim 1 characterised in that, wherein
 - a) the surface of the non-metallic substrate ~~article~~ is not chemically pretreated before ~~the application of~~ depositing the metallic layer deposited without applying an electric current; and
 - b) the metallic layer is not applied to the surface of the non-metallic substrate by thermal spraying, CVD, PVD or laser treatment.

4-5 (Cancelled)

6. (Currently amended) ~~Use according to~~ The method of claim 1 characterised in that, wherein the boundary present between the non-metallic substrate and the metallic layer ~~exhibits~~ has a roughness with a ~~[[n]]~~ maximum R_z value of ~~maximum~~ 35 μm .

7. (Currently amended) ~~Use according to~~ The method of claim 1 characterised in that, wherein the boundary present between the non-metallic substrate and the metallic layer exhibits a roughness with a ~~[[n]]~~ maximum R_a value of ~~maximum~~ 5 μm .

8. (Currently amended) ~~Use according to~~ The method of claim 1 characterised in that, wherein the non-metallic substrate contains at least one ~~fibre~~ fiber-reinforced polymer, ~~in particular a polymer reinforced with carbon fibre and the diameter of the fibre is less than 10 μm .~~

9. (Currently amended) ~~Use according to~~ The method of claim ~~[[1]]~~ 8 characterised in that, wherein the ~~non-metallic substrate contains at least one fibre~~ fiber-reinforced polymer, ~~in particular~~ is a polymer reinforced with glass fibre and the diameter of the fibre is more than 10 μm .

10. (Currently amended) ~~Use according to~~ The method of claim 9 characterised in that, wherein the boundary present between the non-metallic substrate and the metallic layer exhibits a roughness with an R_a value of maximum 10 μm .

11. (Currently amended) ~~Use according to~~ The method of claim 9 characterised in that, wherein the boundary present between the non-metallic substrate and the metallic layer exhibits a roughness with an R_z value of maximum 100 μm .

12. (Currently amended) ~~Use according to~~ The method of claim 1 characterised ~~in that, wherein~~ the polymer is selected from the group consisting of polyamide, polyvinyl chloride, polystyrene, epoxy resin, polyether ether ketone, polyoxymethylene, polyformaldehyde, polyacetal, polyurethane, polyether imide, polyphenyl sulphone, polyphenylene sulphide, polyarylamide, polycarbonate, and polyimide.

13. (Currently amended) ~~Use according to~~ The method of claim 12 characterised ~~in that, wherein~~ the metallic layer ~~exhibits~~ has an adhesive strength of at least 12 N/mm^2 .

14. (Currently amended) ~~Use according to~~ The method of claim 1 characterised ~~in that, wherein~~ the non-metallic substrate is polypropylene or polytetrafluoroethylene[[],].

15. (Currently amended) ~~Use according to~~ The method of claim 1 characterised ~~in that, wherein~~ the standard deviation of the adhesive strength amounts to maximum 25 %, ~~in particular maximum 15 %~~, of the arithmetic mean.

16. (Currently amended) ~~Use according to~~ The method of claim 1 characterised ~~in that, wherein~~ the metal layer deposited without applying an electric current is a metal alloy or metal dispersion layer.

17. (Currently amended) ~~Use according to~~ The method of claim 1 characterised ~~in that, wherein~~ the metal layer deposited without applying an external current is a copper, nickel or gold layer.

18. (Currently amended) ~~Use according to~~ The method of claim 16 characterised ~~in that, wherein~~ the metal dispersion layer deposited without applying an external current is a copper, nickel or gold layer with embedded non-metallic particles.

19. (Currently amended) ~~Use according to~~ The method of claim 18 characterised ~~in that, wherein~~ the non-metallic particles exhibit a hardness of more than 1,500 HV and are selected from the group consisting of silicon carbide, corundum, diamond, and tetraboron carbide.

20. (Currently amended) ~~Use according to~~ The method of claim 18 characterised ~~in that, wherein~~ the non-metallic particles exhibit friction-reducing properties and are selected from the group consisting of polytetrafluoroethylene, molybdenum sulphide, cubic boron nitride, and tin sulphide.

21. (Currently amended) ~~Use according to~~ The method of claim 1 characterised ~~in that~~ further comprising:

after the metal layer is deposited, further depositing a layer of aluminum, titanium, or their alloys onto the metallic layer deposited without applying an external current; and

anodically oxidizing or ceramic treating the deposited layer of aluminum, titanium, or their alloys, ~~a layer of aluminium, titanium or their alloys is applied whose surface is anodically oxidised or ceramics treated.~~

22. (Currently amended) ~~Use according to~~ The method of claim 21 characterised ~~in that, wherein~~ one or several metallic layers are also arranged between the metallic layer deposited without applying an external current and the layer of ~~aluminium~~ aluminum, titanium, or their alloys.

23. (Currently amended) ~~Use according to~~ The method of claim 21 characterised ~~in that, wherein~~ the surface of the article is a ceramic oxide layer of ~~aluminium~~ aluminum, titanium, or their alloys, which layer is coloured black by foreign ion embedments.

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24. (Cancelled)

25. (New) The method of claim 8, wherein the fibre-reinforced polymer is a polymer reinforced with carbon fibre whose diameter is less than 10 μm .

26. (New) The method of claim 15, wherein the standard deviation of the adhesive strength amounts to maximum 15 % of the arithmetic mean.

27. (New) The method of claim 1, wherein the surface surface of a non-metallic substrate is microstructured with a blasting agent.